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Investigation of Purity of Aluminum-Silicon Die Casting Alloys—Donald L. Colwell. Published in ASTM BULLETIN, No. 163, January, 1950, p. 51 (TP1).
Iron-Chromium, Iron-Chromium-Nickel, and Related Alloys. Report of Committee A-10, 126.
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The Dimensional Stability and Shrink-Proofing of Cotton Materials—Edward C. Pfeffer, Jr. Published in ASTM BULLETIN, No. 167, July, 1950, p. 86 (TP168).

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Testing Cement-Base Paint and Dampproofers—W. M. Spurgeon. Published in ASTM BULLETIN, No. 171, January, 1951, p. 53 (TP15).

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Investigation of Purity of Aluminum-Silicon Die Casting Alloys—Donald L. Colwell. Published in ASTM BULLETIN, No. 163, January, 1950, p. 51 (TP1).

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Erosion Resistance.

Laboratory Testing of the Rain Erosion Resistance of Aircraft Finishes—Jack K. Grace and George C. Frey. Published in ASTM BULLETIN, No. 168, September, 1950, p. 56 (TP184); Discussion, p. 63 (TP191).

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Evaporation Rate of Hydrocarbons and Their Mixtures—L. S. Galstaun. Published in ASTM BULLETIN, No. 170, December, 1950, p. 60 (TP286); Discussion, p. 66 (TP 292).

Explosion Test.

Direct Explosion Test to Evaluate Load-Carrying Capacity of Welded Steel Structures—G. S. Mikhalapov. Published in ASTM BULLETIN, No. 172, February, 1951, p. 53 (TP67).

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Discussions of a Century Ago Concerning the Nature of Fatigue, and Review of Some of the Subsequent Researches Concerning the Mechanism of Fatigue—R. E. Peterson. Published in ASTM BULLETIN, No. 164, February, 1950, p. 50 (TP62); Discussion, p. 54 (TP66).
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Fatigue Notch-Sensitivities of Some Aircraft Materials—Horace J. Grover, 717. Discussion, 730.
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Statistical Properties of Fatigue Data on 24S-T Aluminum Alloy—A. K. Head. Published in ASTM BULLETIN, No. 169, October, 1950, p. 51 (TP237).
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Modern Microscopy of Films and Fibers—F. F. Morehead. Published in ASTM BULLETIN, No. 163, January, 1950, p. 54 (TP4).
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Fire-Resistant Finishes for Aircraft—J. A. Jones and R. V. Niswander. Published in ASTM BULLETIN, No. 166, May, 1950, p. 53 (TP115); Discussion, p. 59 (TP121).
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Tests for Air-Entraining Agents in Cement and Concrete—G. W. Washa, C. H. Scholer, D. W. Lewis, and N. H. Withey. Published in ASTM BULLETIN, No. 163,

Freezing-and-Thawing Tests—*continued.*
January, 1950, p. 61 (TP11). Discussion, No. 168, September, 1950, p. 82 (TP210).

Freezing Point.
The Determination of Freezing Point of Engine Antifreeze—R. E. Mallonee and F. L. Howard. Published in ASTM BULLETIN, No. 172, February, 1951, p. 43 (TP57).

Frictional Characteristics.
Effects of Certain Addition Agents Upon the Frictional and Wear Characteristics of Powder Metallurgy Bronzes—J. H. Dedrick. Published in ASTM BULLETIN, No. 169, October, 1950, p. 46 (TP232).

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Proposed Method of Test for Hydrocarbon Type Analysis of Diesel Fuels by Silica Gel Adsorption. Appendix I, Report of Committee D-2, 271.

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Effect of Fungus Growth on the Tensile Strength of Polyvinyl Chloride Films Plasticized with Three Plasticizers—Sigmund Berk. Published in ASTM BULLETIN, No. 168, September, 1950, p. 53 (TP181).

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X-ray Methods in the Analysis and Preparation of Leaded Gasoline—H. A. Liebhafsky and E. H. Winslow. Published in ASTM BULLETIN, No. 167, July, 1950, p. 67 (TP149); Discussion, p. 73 (TP155).

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Effect of Rate of Strain on the Flow Stress of Gas Turbine Alloys at 1200 and 1500 F.—M. J. Manjoine, 931. Discussion, 949.

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Glass and Glass Products. Report of Committee C-14, 219.
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The Measurement of 60-Degree Specular Gloss—H. K. Hammond, III and I. Nimeroff. Published in ASTM BULLETIN, No. 169, October, 1950, p. 54 (TP240).

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Equipment for The Determination of Insulation Resistance at High Relative Humidities—A. T. Chapman. Published in ASTM BULLETIN, No. 165, April, 1950, p. 43 (TP69).

Hydrocarbons.

Evaporation Rate of Hydrocarbons and Their Mixtures—L. S. Galstaun. Published in ASTM BULLETIN, No. 170, December, 1950, p. 60 (TP286).

Industrial Aromatic Hydrocarbons. Report of Committee D-16, 385.

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A Proposed Method of Test for Specific Heat of Thermal Insulating Materials—Norman H. Spear. Published in ASTM BULLETIN, No. 168, September, 1950, p. 79 (TP207); Discussion, No. 173, April, 1951, p. 50 (TP104).

Equipment for the Determination of Insulation Resistance at High Relative Humidities—A. T. Chapman. Published in ASTM BULLETIN, No. 165, April, 1950, p. 43 (TP69).

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Evaluation of Rubbing Compounds for Use on Lacquered Aircraft Surfaces—R. A. Machlowitz. Published in ASTM BULLETIN. No. 170, December, 1950, p. 31 (TP257).

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A Reduction-of-Area Gage for Use at Low Temperatures—G. W. Geil and N. L. Carwile. Published in ASTM BULLETIN, No. 163, January, 1950, p. 75 (TP25).

Lubricants.

A Suggested Relocation and Respacing of the Union Colorimeter Scale for Lubricating Oil and Petrolatum—Deane B. Judd, Lorenzo Plaza, and Marion A. Belknap. Published in ASTM BULLETIN, No. 167, July, 1950, p. 63 (TP145).

Compressor Lubrication—K. L. Hollister. Published in ASTM BULLETIN, No. 170, December, 1950, p. 35 (TP261).

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Some Properties of Reinforced Grouted Brick Masonry—Norman W. Kelch. Published in ASTM BULLETIN, No. 168, September, 1950, p. 67 (TP194); Discussion, p. 77 (TP205).

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tron Microscopy of Fibers—Sanford B. Newman. Published in ASTM BULLETIN, No. 163, January, 1950, p. 57 (TP7).
Modern Microscopy of Films and Fibers—F. F. Morehead. Published in ASTM BULLETIN, No. 163, January, 1950, p. 54 (TP4).
Some Applications of Modern Microscopy to the Study of Chemical Phenomena and in the Dyeing and Printing of Textiles—G. L. Royer. Published in ASTM BULLETIN, No. 165, April, 1950, p. 46 (TP72); Discussion, No. 167, July, 1950, p. 73 (TP155).

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Discussion of Paper on Electrical Method for Evaluation of Protective Coatings as Moisture Barriers. Published in ASTM BULLETIN, No. 166, May, 1950, p. 51 (TP113).

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Colorimetry—A Panel Discussion. Published in ASTM BULLETIN, No. 170, December, 1950, p. 38 (TP264).

Correlation of Accelerated Weathering Machines—Roy W. Hill, George S. Cook, and William E. Moyer. Published in ASTM BULLETIN, No. 164, February, 1950, p. 32 (TP44).

Evaluation of Empirical Viscosity Measurements for Varnishes and Resin Solutions—Maynard R. Euverard. Published in ASTM BULLETIN, No. 169, October, 1950, p. 67 (TP253).

Methods of Evaluating Aircraft Primers—Edward T. Nelson. Published in ASTM BULLETIN, No. 167, July, 1950, p. 88 (TP170); Discussion, p. 90 (TP172).

Paint, Varnish, Lacquer, and Related Products. Report of Committee D-1, 237.

Proposed Modification of the Kauri Reduction Test. Published in ASTM BULLETIN, No. 163, January, 1950, p. 46.

Testing Cement-Base Paints and Dampproofers—W. M. Spurgeon. Published in ASTM BULLETIN, No. 171, January, 1951, p. 53 (TP15).

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A Suggested Relocation and Respacing of the Union Colorimeter Scale for Lubricating Oil and Petrolatum—Deane B. Judd, Lorenzo Plaza, and Marion A. Belknap. Published in ASTM BULLETIN, No. 167, July, 1950, p. 63 (TP145).

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Effect of Fungus Growth on the Tensile Strength of Polyvinyl Chloride Films Plasticized with Three Plasticizers—Sigmund Berk. Published in ASTM BULLETIN, No. 168, September, 1950, p. 53 (TP181).
Effects of Elevated Temperatures on Strength of Thermosetting Plastic Laminates—N. Fried, R. R. Winans, and L. E. Sieffert, 1383.
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Laboratory Testing of the Rain Erosion Resistance of Aircraft Finishes—Jack K. Grace and George C. Frey. Published in ASTM BULLETIN, No. 168, September, 1950, p. 56 (TP184).
Outdoor Weather Aging of Plastics Under Various Climatological Conditions—S. F. Yustein, R. R. Winans, and H. J. Stark. Published in ASTM BULLETIN, No. 173, April, 1951, p. 31 (TP85); Discussion, p. 43 (TP97).
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Resistance of Representative Plastic Materials to Hydrofluoric Acid—Frank W. Reinhart and Harry C. Williams, Jr. Published in ASTM BULLETIN, No. 167, July, 1950, p. 60 (TP142).
Some Instruments for Measuring the Dynamic Mechanical Properties of Plastic

Plastics—*continued.*

Materials—Lawrence E. Nielson. Published in ASTM BULLETIN, No. 165, April, 1950, p. 48 (TP74).

Stress Cracking of Polyethylene—R. H. Carey. Published in ASTM BULLETIN, No. 167, July, 1950, p. 56 (TP138); Discussion, No. 171, January, 1951, p. 62 (TP24).

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Stress Cracking of Polyethylene—R. H. Carey. Published in ASTM BULLETIN, No. 167, July, 1950, p. 56 (TP138); Discussion, No. 171, January, 1951, p. 62 (TP24).

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Pressure Vessels.

Some Considerations in the Joining of Dissimilar Metals for High-Temperature High-Pressure Service—O. R. Carpenter, N. C. Jessen, J. L. Oberg and R. D. Wylie, 809. Joint Discussion, 858.

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Printing Textiles.

Some Applications of Modern Microscopy to the Study of Chemical Phenomena and in the Dyeing and Printing of Textiles—G. L. Royer. Published in ASTM BULLETIN, No. 165, April, 1950, p. 46 (TP72); Discussion, No. 167, July, 1950, p. 73 (TP155).

Pulp.

Rotary Screen for Laboratory Separation of Shives from Mechanically Prepared Wood Pulp—H. W. Greider, R. A. MacArthur, and L. C. Gischig. Published in ASTM BULLETIN, No. 169, October, 1950, p. 27 (TP213).

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Corps of Engineers' Method for Design and Control of Asphalt Paving Mixtures—G. McFadden and W. C. Ricketts. Published in ASTM BULLETIN, No. 171, January, 1951, p. 39 (TP1).

Mixing and Sampling with Special Reference to Multi-Sized Granular Material—David Buslik. Published in ASTM BULLETIN, No. 165, April, 1950, p. 66 (TP92).

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Statistical Properties of Fatigue Data on 24S - T Aluminum Alloy—A. K. Head. Published in ASTM BULLETIN, No. 169, October, 1950, p. 51 (TP237).

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Improved Radioactive-Tracer Carrier for Metal Cleaning Studies—J. C. Harris, R. E. Kamp, and W. H. Yanko. Published in ASTM BULLETIN, No. 170, December, 1950, p. 82 (TP308).

Radiography.

An Evaluation of Radiography with Particular Emphasis on Detection Methods—Carlton H. Hastings. Published in ASTM BULLETIN, No. 172, February, 1951, p. 66 (TP80).

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Radome Materials.

Preliminary Considerations for Testing Sandwich Radome Materials—G. R. Huisman and R. H. Wight. Published in ASTM BULLETIN, No. 164, February, 1950, p. 19 (TP31).

Rain Erosion.

Laboratory Testing of the Rain Erosion Resistance of Aircraft Finishes—Jack K. Grace and George C. Frey. Published in ASTM BULLETIN, No. 168, September, 1950, p. 56 (TP184).

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Rayon.

Modern Microscopy of Films and Fibers—F. F. Morehead. Published in ASTM BULLETIN, No. 163, January, 1950, p. 54 (TP4).

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Refractive Index.

Proposed Method of Test for Measurement of Refractive Index and Refractive Dispersion of Hydrocarbon Liquids. Appendix IV, Report of Committee D-2, 284.

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Some Properties of Reinforced Grouted Brick Masonry—Norman W. Kelch. Published in ASTM BULLETIN, No. 168, September, 1950, p. 67 (TP195); Discussion, p. 77 (TP205).

Reinforced Concrete.

A New Technique for Bond Measurement in Reinforced Concrete—J. Trueman Thompson and Alvin C. Loewer, Jr. Published in ASTM BULLETIN, No. 166, May, 1950, p. 69 (TP131); Discussion No. 169, October, 1950, p. 53 (TP239).

Research.

Discussions of a Century Ago Concerning the Nature of Fatigue, and Review of Some of the Subsequent Researches Concerning the Mechanism of Fatigue—R. E. Peterson. Published in ASTM BULLETIN, No. 164, February, 1950, p. 50 (TP62); Discussion, p. 54 (TP66).

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Resins.

Evaluation of Empirical Viscosity Measurements for Varnishes and Resin Solutions—Maynard R. Euverard. Published in ASTM BULLETIN, No. 169, October, 1950, p. 67 (TP253).

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Proposed Alternate Method of Test for Unsaponifiable Matter in Rosin. Appendix, Report of Committee D-17, 391.

The Use of Electrical Measurements to Predict the Mechanical Properties of Plasticized Polyvinyl Resins—A. J. Warner. Published in ASTM BULLETIN, No. 165, April, 1950, p. 53 (TP79).

Road Materials.

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Corps of Engineers' Method for Design and Control of Asphalt Paving Mixtures—G. McFadden and W. C. Ricketts. Published in ASTM BULLETIN, No. 171, January, 1951, p. 39 (TP1).

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Rubber.

Approximating the Attractive Forces of Adhesion for Glass and Other Surfaces—Frank Moser. Published in ASTM BULLETIN, No. 169, October, 1950, p. 62 (TP248).

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Durability Tests of Metalite Sandwich Constructions—David G. Reid. Published in ASTM BULLETIN, No. 164, February, 1950, p. 28 (TP40).

Preliminary Considerations for Testing Sandwich Radome Materials—G. R. Huisman and R. H. Wight. Published in ASTM BULLETIN, No. 164, February, 1950, p. 19 (TP31).

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Screening Tests.

Rotary Screen for Laboratory Separation of Shives from Mechanically Prepared Wood Pulp—H. W. Greider, R. A. MacArthur, and L. C. Gischig. Published in ASTM BULLETIN, No. 169, October, 1950, p. 27 (TP213).

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Setting Time.

Mechanically Determining the Time of Set of Portland Cement by Means of the Spissograph—O. J. Glantz and L. E. Halsted. Published in ASTM BULLETIN, No. 170, December, 1950, p. 79 (TP305).

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Rotary Screen for Laboratory Separation of Shives from Mechanically Prepared Wood Pulp—H. W. Greider, R. A. McArthur, and L. C. Gischig. Published in ASTM BULLETIN, No. 169, October, 1950, p. 27 (TP213).

Shrinkage.

Dimensional Stability of Woolen and Worsted Fabrics—Werner von Bergen and Claude S. Clutz. Published in ASTM BULLETIN, No. 167, July, 1950, p. 74 (TP156).

Shrinkage Control of Viscose Rayon Fabrics—J. A. Woodruff. Published in ASTM BULLETIN, No. 167, July, 1950, p. 83 (TP165).

The Dimensional Stability and Shrink-Proofing of Cotton Materials—Edward C. Pfeffer, Jr. Published in ASTM BULLETIN, No. 167, July, 1950, p. 86 (TP168).

Sigma Phase.

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A Universal Loading Machine for Engineering Tests on Soils—B. K. Hough. Published in ASTM BULLETIN, No. 170, December, 1950, p. 44 (TP270).

Electrical Resistivity Method Applied to the Investigation of Construction Materials Deposits—E. A. Abdun-Nur and Dart Wantland, 1364. Discussion, 1379.

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Study of Deformation at High Strain Rates Using High-Speed Motion Pictures—H. I. Fusfeld and Josephine Carr Feder. Published in ASTM BULLETIN, No. 170, December, 1950, p. 75 (TP301).

Tensile Properties of Some Aircraft Structural Materials at Various Rates of Loading—Richard F. Klinger, 1035. Discussion, 1051.

The Influence of Strain Rate on Some Tensile Properties of Steel—D. S. Clark and P. E. Duwez, 560. Discussion, 576.

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Mechanically Determining the Time of Set of Portland Cement by Means of the Spissograph—O. J. Glantz and L. E. Halsted. Published in ASTM BULLETIN, No. 170, December, 1950, p. 79 (TP305).

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Spray Testing With Natural and Synthetic Sea Water. Part I. Corrosion Characteristics in the Testing of Metals—Thomas P. May and Allen L. Alexander, 1131. Discussion, 1142.

Spray Testing With Natural and Synthetic Sea Water. Part II.—A Study of Organic Coatings—Allen L. Alexander and Thomas P. May, 1144. Discussion, 1150.

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Standards and Standardization.

Plastics Specifications in the Federal Government—Gerald Reinsmith. Published in ASTM BULLETIN, No. 163, January, 1950, p. 78 (TP28).

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The Need for Standardization of Industrial Diamond Products—H. L. Strauss, Jr. Published in ASTM BULLETIN, No. 165, April, 1950, p. 57 (TP83).

Statistical Analysis.

Mixing and Sampling with Special Reference to Multi-Sized Granular Material—David Buslik. Published in ASTM BULLETIN, No. 165, April, 1950, p. 66 (TP92).

Quality Control of Materials. Report of Committee E-11, 509.

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Tests for Air-Entraining Agents in Cement and Concrete. Published in ASTM BULLETIN, No. 163, January, 1950, p. 61 (TP11).

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X-ray Methods in the Analysis and Preparation of Leaded Gasoline. Published in ASTM BULLETIN, No. 167, July, 1950, p. 67 (TP149).

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Evaluation of Adhesives for Acoustical Tile. Published in ASTM BULLETIN, No. 169, October, 1950, p. 57 (TP243).

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Evaluation of Rubbing Compounds for Use on Lacquered Aircraft Surfaces. Published in ASTM BULLETIN, No. 170, December, 1950, p. 31 (TP257).

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Discussion, published in ASTM BULLETIN, No. 168, September, 1950, p. 77 (TP205).

Malcolm, V. T.

Sigma Phase in Several Cast Austenitic Steels—Summary of Proceedings of the Symposium on the Nature, Occurrence, and Effects of Sigma Phase, 1209.

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The Determination of Freezing Point of Engine Antifreeze. Published in ASTM BULLETIN, No. 172, February, 1951, p. 43 (TP57).

Malloy, A. M.

Discussion published in ASTM BULLETIN No. 167, July, 1950. p. 92 (TP174).

Discussion, published in ASTM BULLETIN, No. 168, September, 1950, p. 63 (TP191).

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The Tetragonality of the Sigma Phase in the Iron-Chromium System—Summary of Proceedings of the Symposium on the Nature, Occurrence, and Effects of Sigma Phase, 1209.

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Direct Explosion Test to Evaluate Load-Carrying Capacity of Welded Steel Structures. Published in ASTM BULLETIN, No. 172, February, 1951, p. 53 (TP67).

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Laboratory Tests of Protective Coatings *versus* Service Results. Published in ASTM BULLETIN, No. 165, April, 1950, p. 73 (TP99). Discussion, p. 80 (TP106).

Summary of Methods for Determining Pozzolanic Activity—Summary of Proceedings of the Symposium on Use of Pozzolanic Materials in Mortars and Concretes, 1327.

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Modern Microscopy of Films and Fibres. Published in ASTM BULLETIN, No. 163 January, 1950, p. 54 (TP4).

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Annual Address by the President, 26. Also published in ASTM BULLETIN, No. 167, July, 1950, p. 55 (TP137).

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Panel Discussion on Colorimetry. Published in ASTM BULLETIN, No. 170, December, 1950, p. 39 (TP265).

Moser, Frank

Approximating the Attractive Forces of Adhesion for Glass and Other Surfaces. Published in ASTM BULLETIN, No. 169, October, 1950, p. 62 (TP248).

Moyer, William E.

Correlation of Accelerated Weathering Machines. Published in ASTM BULLETIN, No. 164, February, 1950, p. 32 (TP44).

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Discussion, published in ASTM BULLETIN, No. 166, May, 1950, p. 60 (TP122).

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Discussion, published in ASTM BULLETIN, No. 173, April, 1951, p. 43 (TP97).

Newman, Sanford B.

A New Technique for Cutting Very Thin Sections and Its Application to the Electron Microscopy of Fibers. Published in ASTM BULLETIN, No. 163, January, 1950, p. 57 (TP7).

Nielsen, Lawrence E.

Some Instruments for Measuring the Dynamic Mechanical Properties of Plastic Materials. Published in ASTM BULLETIN, No. 165, April, 1950, p. 48 (TP74).

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The Measurement of 60-Degree Specular Gloss. Published in ASTM BULLETIN, No. 169, October, 1950, p. 54 (TP240).

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Investigation of Bearing Materials Under Various Degrees of Lubrication in the Low-Speed Range. Published in ASTM BULLETIN, No. 168, September, 1950, p. 47 (TP175).

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Discussion, published in ASTM BULLETIN, No. 173, April, 1951, p. 50 (TP104).

Peterson, R. E.

Discussions of a Century Ago Concerning the Nature of Fatigue, and Review of Some of the Subsequent Researches Concerning the Mechanism of Fatigue. Published in ASTM BULLETIN, No. 164, February, 1950, p. 50 (TP62). Discussion, p. 55 (TP67).

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Experience with Pozzolanic Materials in Kansas—Summary of Proceedings of the Symposium on Use of Pozzolanic Materials in Mortars and Concrete, 1327.

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Pickus, M. R.

Creep as a Surface Dependent Phenomenon—Summary of Proceedings of the Symposium on Corrosion of Materials at Elevated Temperatures, 1207.

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Ultrasonic Testing of Bronze Forgings and Ingots—Summary of Proceedings of the Symposium on Ultrasonic Testing, 1435.

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Fatigue Characteristics of Aircraft Materials and Fastenings. Published in ASTM BULLETIN, No. 166, May, 1950, p. 60 (TP122).

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A Suggested Relocation and Respacing of the Union Colorimeter Scale for Lubricating Oil and Petrolatum. Published in ASTM BULLETIN, No. 167, July, 1950, p. 63 (TP145).

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Resistance of Representative Plastic Materials to Hydrofluoric Acid. Published in ASTM BULLETIN, No. 167, July, 1950, p. 60 (TP142).

Discussion, published in ASTM BULLETIN, No. 173, April, 1951, p. 43 (TP97).

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Plastics Specifications in the Federal Government, Published in ASTM BULLETIN, No. 163, January, 1950, p. 78 (TP28).

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Analysis and Interpretation of Dynamic Records—Summary of Proceedings of the Symposium on Dynamic Stress Determinations, 1433.

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A Proposed Method of Test for Specific Heat of Thermal Insulating Materials. Published in ASTM BULLETIN, No. 168, September, 1950, p. 79 (TP207). Discussion, No. 173, April, 1951, p. 51 (TP105).

Spindt, R. S.

A Laboratory Study of Intake Valve Burning. Published in ASTM BULLETIN, No. 164, February, 1950, p. 43 (TP55).

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Testing Cement Base Paints and Dampproofers. Published in ASTM BULLETIN, No. 171, January, 1951, p. 53 (TP15). Discussion, p. 56 (TP18).

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Outdoor Weather Aging of Plastics Under Various Climatological Conditions. Published in ASTM BULLETIN No. 173, April, 1951, p. 31 (TP85).

Stauffacher, E. R.

Discussion, published in ASTM BULLETIN, No. 165, April, 1950, p. 78 (TP104).

Stevens, R. R.

Felt Tests and Specifications and Their Interpretation. Published in ASTM BULLETIN, No. 164, February, 1950, p. 48 (TP60).

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A New Technique for Bond Measurement in Reinforced Concrete. Published in ASTM BULLETIN, No. 166, May, 1950, p. 69 (TP131). Discussion, published in ASTM BULLETIN, No. 169, October, 1950, p. 54 (TP 240).

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Survey of Pickups for Dynamic Physical Measurements—Summary of Proceedings of the Symposium on Dynamic Stress Determination, 1433.

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Stress Corrosion Tests on Turbo-Supercharger Materials in the Products of Combustion of Leaded Gasoline—Summary of Proceedings of the Symposium on Corrosion of Materials at Elevated Temperatures, 1207.

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Resistance of Representative Plastic Materials to Hydrofluoric Acid. Published in ASTM BULLETIN, No. 167, July, 1950, p. 60 (TP142).

Williams, J. L.

Discussion, published in ASTM BULLETIN, No. 171, January, 1951, p. 62 (TP24).

Willis, Edward A.

Soil Classification for Highway Purposes—Summary of Proceedings of the Symposium on the Identification and Classification of Soils, 1430.

Wilsnack, G. C.

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The Optimum Gypsum Content of Portland Cement. Published in ASTM BULLETIN, No. 169, October, 1950, p. 39 (TP225).

Wilson, J. N.

Discussion, published in ASTM BULLETIN, No. 170, December, 1950, p. 67 (TP293).

Winans, R. R.

Effects of Elevated Temperatures on Strength of Thermosetting Plastic Laminates, 1383.

Outdoor Weather Aging of Plastics Under Various Climatological Conditions. Published in ASTM BULLETIN, No. 173, April, 1951, p. 31 (TP85).

Winslow, E. H.

X-Ray Methods in the Analysis and Preparation of Leaded Gasoline. Published in ASTM BULLETIN, No. 167, July, 1950, p. 67 (TP 149).

Wishart, R. S.

Discussion, published in ASTM BULLETIN, No. 171, January, 1951, p. 52 (TP14).

Withey, N. H.

Tests for Air-Entraining Agents in Cement and Concrete. Published in ASTM BULLETIN, No. 163, January, 1950, p. 61 (TP11).

Witte, L. P.

Effect of Calcination on Natural Pozzolans—Summary of Proceedings of the Symposium on Use of Pozzolanic Materials in Mortars and Concretes, 1327.

Wolfe, Court L.

A Laboratory Study of Intake Valve Burning. Published in ASTM BULLETIN, No. 164, February, 1950, p. 43 (TP55).

Wolford, E. Y.

Discussion, published in ASTM BULLETIN, No. 171, January, 1951, p. 62 (TP24).

Wood, D. S.

The Influence of Specimen Dimension and Shape on the Results in Tension Impact Testing, 577. Discussion, 586.

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Impact Deposition of Atmospheric Sea Salts on a Test Plate, 1151. Discussion, 1164.

Woodruff, J. A.

Shrinkage Control of Viscose Rayon Fabrics. Published in ASTM BULLETIN, No. 167, July, 1950, p. 83 (TP165).

Worley, H. E.

Triaxial Design Correlated With Flexible Pavement Performance in Kansas—Summary of Proceedings of the Symposium on Triaxial Loading, 1431.

Worley, W. J.

The Effect of Temperature on the Creep and Recovery of a Melamine-Glass Fabric Laminate, 1399.

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Some Considerations in the Joining of Dissimilar Metals for High-Temperature High-Pressure Service, 809.

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Yanko, W. H.

Improved Radioactive-Tracer Carrier for Metal Cleaning Studies. Published in ASTM BULLETIN, No. 170, December, 1950, p. 82 (TP308).

Youden, W. J.

Comparative Tests in a Single Laboratory, Published in ASTM BULLETIN, No. 166, May, 1950, p. 48 (TP110).

The Selection of a Limited Number From Many Possible Conditioning Treatments for Alloys to Achieve Best Coverage and Statistical Evaluation, 951.

Use of Statistics to Determine Precision of Test Methods—Summary of Proceedings of the Symposium on Application of Statistics, 1432.

Yurenka, Steven

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Yustein, S. E.

Outdoor Weather Aging of Plastics Under Various Climatological Conditions. Published in ASTM BULLETIN, No. 173, April, 1951, p. 31 (TP85).

Z

Zapffe, C. A.

Hydrogenizing Effect of Steam on Ferrous Alloys at Elevated Temperatures—Summary of Proceedings of the Symposium on Corrosion of Materials at Elevated Temperatures, 1207.

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Zuschlag, T.

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LIST OF SPECIAL TECHNICAL PUBLICATIONS

In the Proceedings, Volume 48, page 1352 (1948), and Volume 49, page 1240 (1949) the Society published the list of Special Technical Publications that have been published by the Society since its organization. The following are the publications that have been printed during the year 1950 and issued as a separate publication not included in either Proceedings or ASTM BULLETIN.

Special Technical Publication Number	Title
15-C	Manual on Quality Control of Materials (1950).
48-B	Alphabetical and Numerical Indexes of X-Ray Diffraction Data (1950).
52-A	Data on Corrosion- and Heat-Resistant Steels and Alloys—Wrought and Cast (1950).
56-F	1949 Supplement to the Bibliography and Abstracts on Electrical Contacts.
58-B	Report on Standard Samples for Spectrochemical Analysis (1950).
99	Symposium on Use of Pozzolanic Materials in Mortars and Concretes (1949).
100	Report on the Strength of Wrought Steels at Elevated Temperatures (1950).
101	Symposium on Ultrasonic Testing (1949).
102	Symposium on High Additive Content Oils (1949).
103	Symposium on Application of Statistics (1949).
104	Symposium on Dynamic Stress Determinations (1949).
105	Symposium on Turbine Oils (1949).
106	Symposium on Triaxial Testing of Soils and Bituminous Mixtures (1950).
107	Symposium on Plasticity and Creep of Metals (1949).
108	Symposium on Corrosion of Materials at Elevated Temperatures (1950).
109	Physical Constants of Hydrocarbons Boiling Below 350 F. (1950).
110	Symposium on the Nature, Occurrence, and Effects of Sigma Phase (1950).
111	Symposium on Viscosity Measurements (1950).
112	Symposium on the Rôle of Non-Destructive Testing in the Economics of Production (1950).
113	Symposium on the Identification and Classification of Soils (1950).